Wessex Water

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A drive for efficiency predated privatisation at Wessex Water and set the stage for a US takeover in 1998.

Sold on the States

In July last year Wessex chairman Colin Skellett received a phone call from Texas. 'We like the look of your company and we're going to buy you,' was the essence of the message from Enron Corporation's president Ken Lay.

Enron was looking for a water company to act as a flagship in the move to diversify from its vast interests in oil and gas in North and South America. Wessex was a plc with a market capitalisation of about £1bn.

The deal was completed in September last year when Enron paid US$2.3bn for the company; £6.35 a share. Original investors at privatisation had done rather well. A share division meant that the 240p paid in 1989 had grown to 1270p.

Wessex was Enron's first water acquisition. More followed and in June this year the company floated them all on the New York Stock Exchange as Azurix Corporation - the name is derived from French, azure for blue, and Latin, rodix for root. Ownership is now split equally between Enron, institutional and private shareholders.

The Corporation operates water services for a total of 6M people in the UK and the Americas. Azurix companies across the Atlantic serve Hamilton and Niagara in Canada; part of Mexico City and in Cancun, Mexico; and in Mendoza and parts of Buenos Aires, Argentina, where a US$1.5bn infrastructure investment is being made.

For about 40 of Wessex's engineering staff it has meant a totally new perspective to their jobs as they have responsibility worldwide for areas such as quality and health and safety.

Passion for pellets

Dried sludge. Don't mention it in Wessex Water's Bristol office unless you really want to be presented with sample bottles of what look like peppercorns to sniff.

At Wessex they love the stuff, having pioneered the technology in the UK since 1991 when the company was facing a decision over its sludge boat, the MV Glenavon.

The boat had been built in 1966 to carry away detritus for sea disposal from the Bristol and Bath outfall treatment works. By 1991 the Glenavon needed a major refit but Wessex knew that, under EC Directive, disposal at sea would have to stop by December 1998.

Spending money on the boat was obviously not the appropriate thing to do and so Wessex explored what might be the least environmentally damaging solution. Land disposal would have involved 500 tanker loads a week, so other ideas were investigated.

One concept researched was manufacturing oil from sludge. This required dried granules of sludge to feed into a fluidised bed furnace - so the first step was to find a way of producing pellets.

'We latched onto a drying process being used by a company at Biel in Switzerland,' says Wessex director of quality and regulation Gareth Jones.

'We took 20,000 litres of sludge over and brought the product back in a bag in the back of a Range Rover.'

The project focused on building a dryer to produce pellets. Avonmouth soon had the largest bio-dryer in the world, evaporating 4t of water an hour and producing up to 34t of dry sludge a day. Fuel to drive the plant can be sludge, gas or diesel oil. Centrifuged sludge is fed into what is effectively a huge tumble dryer running at 430degreesC. After 15 minutes it emerges as pellets which Jones claims is '500 times better than a US Class A sludge. Typically, you can't detect any salmonella, coliforms or viruses.'

Wessex obtained a licence from the manufacturer, Swiss Combi Technology, and then in 1996 it bought the company. Since then it has commissioned 18 dryers in Europe, South Africa and the US. In the UK, Southern Water and Anglian Water have dryers. Wessex is building a second plant in Bristol and others in Bournemouth, Weston Super Mare, Salisbury, Yeovil and Taunton.

All the product goes to beneficial use, says Jones. The batch controlled 'biogran' is sold for £25/t. In Ireland work is just starting on a design and build project for Dublin at Rings End sewage works where the effluent is 50% industrial, half coming from the Guinness brewery.

Costly repairs

'Flush and forget' is Wessex's aim for its customer focus on wastewater. However this requires the drainage infrastructure to be in a good state of repair. In bargaining with the Ofwat Regulator for

AMP3 spending, the company has been concentrating on the need to put more capital spend into infrastructure. Three major sewer tunnel collapses emphasise the point.

The most serious was in August when an 18m length of Bristol's 2.4m diameter southern outfall collapsed without warning at Coronation Road. Emergency operations to dig down 17m and install an over-pumping system cost the company around £0.5M in the 24 hours after the failure. A long-term repair has yet to be completed.

The collapse occurred where the 23-year-old concrete segmental lined tunnel emerged from rock and passed through an area of old fill material.